

Eagle Zinc Remedial Investigation/Feasibility Study Statement of Work OU2

RAC II REGION 5 STATEMENT OF WORK FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)

Eagle Zinc, Montgomery County, Illinois

May 12, 2010

Statement of Work Revision No. 1

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CONTRACT NO: EP-S5-06-01

INTRODUCTION

PURPOSE

The purpose of this work assignment is to conduct a remedial investigation/feasibility study (RI/FS) at Eagle Zinc Site to select a remedy that eliminates, reduces, or controls risks to human health and the environment. Specifically, the RI/FS involves the investigation and study of soil and groundwater onsite. This statement of work (SOW) sets forth the framework and requirements for this effort. The goal is to develop the minimum amount of data necessary to support the selection of an approach for site remediation and then to use this data to result in a well-supported Record of Decision (ROD). The purpose of revision not be the SOW is to document Tasks 9, 10, and 12 as Not Applicable (NA) since there is insufficient time remaining in the Base Period which expires on March 14, 2011 to complete these tasks.

SITE DESCRIPTION

The site is located in mixed industrial/commercial/ residential area in Hillsboro, Montgomery County, Illinois. The site is about 132 acres with about 30 acres of buildings and associated structures. There are about 23 buildings onsite that were previously used for facility operations; the types of buildings include offices, laboratories, manufacturing/processing, equipment/raw material/finished product storage, bag houses and maintenance facilities. Also, located on the site are railroad spurs, raw material and residual material, two storm water retention ponds, a small pond and several roads. Active industrial operations ceased in 2003. The area has been zoned commercial/industrial and there are no plans to re-zone the area for other uses.

Previous investigations have taken place since the early 1980's conducted by the PRPs; the last deliverable received from the PRPs was the draft RI in 2005. The initial Remedial Investigation started in 2001 and a RI report was produced in 2005. The major PRP went out of business in 2003 and settled with the Agency a few years later. In 2006, CH2MHill submitted a FS Supplement to address weaknesses found in the PRPs' FS. The Illinois Environmental Protection Agency (IEPA) asked USEPA to take the lead and put the site on the National Priorities List (NPL), which was done in 2007. The previous investigations show multiple residue piles throughout the site that exceed the screening levels. The contaminants of concern on-site include lead and cadmium. Other contaminants on-site include copper, zinc, and manganese.

In 2008, the buildings and associated structures on-site were sampled by IEPA and the revealed significantly high levels of lead concentrations in, on, and around the buildings. As a result of these findings, EPA divided the site into two operable units (OUs). OU1 was designated as the buildings OU as

was meant to address the short-term risks. That said, EPA completed an interim removal action in January 2009 to mitigate site access and exposure by fencing off the most accessible areas of the site. Subsequently, in May 2009 EPA issued an interim Proposed Plan to address the demolition of the buildings. Finally, in March 2010, EPA issued Work Assignment 067.

The other operable unit, OU 2 – Soil and Groundwater, was designated to address the long-term risks and is the focus of this RI/FS SOW.

GENERAL REQUIREMENTS

This is a supplemental RI/FS. The contractor shall concentrate on addressing the following issues in the RI/FS:

- Put all existing data together in a figure for each media.
- Verify the residue boundaries.
- Collect samples from the ground water in the true aquifer after installation of proper monitoring wells.
- Collect synthetic precipitation leachate procedure test (SPLP) on residue outside the previously sampled residue piles.
- Investigate the damaged storm drain structure onsite migration pathways and amount of residue.
- Sample property located on a triangular area south east corner across the road from the site and adjacent pond off-site.
- Sample wetland area on the west side as needed if it appears that storm water discharge to this area may have caused sediment contamination in excess of that documented in the RI.
- Sample road ditches on northwest side.
- Sample retention ponds.
- All surface water samples filtered and unfiltered.
- Look into natural attenuation and geochemical parameters for ground water.
- Take a close look at the current eco- risk assessment and conduct further evaluation if appropriate.

This is a term-form work assignment that requires the contractor to document how the RI/FS will be implemented in order to provide the information necessary for the Agency to develop a well-supported ROD that when implemented through a remedial action will eliminate, reduce or control risks to human health and the environment. The contractor shall furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing and completing the RI/FS in accordance with the requirements of this SOW.

This SOW is provided as a format for the contractor to structure its proposed approach and cost estimate. The contractor shall use the WBS in cost estimate preparation, and technical and cost tracking and reporting under this work assignment.

In conducting the work assignment, EPA expects the contractor to propose the most appropriate and costeffective procedures and methodologies using accepted engineering practices and controls. Throughout the performance of this work assignment, EPA expects the contractor to be responsible for performing services and providing products at the lowest reasonable cost. If there are changes to the SOW by the

government, the government will issue a formal amendment to the SOW and negotiate the cost of the amendment with the contractor to form a new cost estimate.

A summary of the potential major deliverables and proposed schedule for submittals is in Attachment 1. This summary and schedule can be used as the basis for the contractor's proposed deliverables and schedules included in the work plan.

The contractor shall communicate at least weekly with the EPA contracting officer representative (COR), either in face-to-face meetings or through conference calls.

EPA provides oversight of contractor activities throughout the RI/FS. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA also reviews deliverables to assess the likelihood that the RI/FS achieves its goals and that its performance and operations requirements have been met. Acceptance of deliverables by EPA does not relieve the RI/FS contractor from responsibility for the adequacy of deliverables or its professional responsibilities.

RECORD KEEPING REQUIREMENTS

The contractor shall maintain all technical and financial records for the RI/FS in accordance with the contract. The Agency and the contractor shall endeavor to submit documents and deliverables using electronic media whenever possible. At the completion of the work assignment, the contractor shall submit an official record of the RI/FS in both compact disk and a hardcopy to the COR.

US EPA PRIMARY CONTACT

The primary contact for this work assignment is Nefertiti Simmons. She can be reached at (312) 886 - 6148, via facsimile at (312) 692-2587, or via e-mail at simmons.nefertiti@epa.gov. Her mailing address is US EPA Region 5, 77 West Jackson (SR-6J), Chicago, IL, 60604. The secondary contact is Pat Vogtman. She can be reached at (312) 886-9553, or via e-mail at vogtman.pat@epa.gov. Her mailing address is US EPA Region 5, 77 West Jackson (SM-7J), Chicago, IL, 60604.

WORK ASSIGNMENT COMPLETION DATE AND PROJECT CLOSEOUT

At the completion of the work assignment, the contractor shall perform all necessary project closeout activities as specified in the contract. These activities include closing out any subcontracts, indexing and consolidating project records and files as required above, and providing a technical and financial closeout report to EPA. The goal is to complete all technical activities and closeout activities for this work assignment by February 28, 2011.

Task 1 - Project Planning and Support

This work element involves planning for the execution and overall management of this work assignment. The technical and managerial activities required to implement the RI/FS and the associated costs shall be developed during the planning phase and detailed in the RI/FS Work Plan and cost estimate.

Task 1.1 Work Plan

The contractor shall prepare and submit a RI/FS Work Plan that includes a detailed description of implementation activities, performance monitoring, and overall management strategy, including optimization, for the RI/FS. Typical activities involved in preparing the work plan include, but are not limited to, the following:

- The contractor shall contact the COR within five calendar days after receipt of the work assignment to schedule the kickoff meeting to be held at via teleconference with the U.S. EPA Region 5 office in Chicago, IL.
- If the RI/FS contractor is unfamiliar with the site, the contractor shall review background documents relevant to the RI/FS as provided by the COR for purposes of the work plan preparation.
- If the RI/FS contractor is unfamiliar with the site, the contractor shall conduct a site visit with the COR during the RI/FS planning phase to assist in developing an understanding of the site and any logistics.
- The contractor shall prepare and submit a final RI/FS Work Plan within 30 calendar days after the kick-off meeting. The contractor shall prepare a work plan which includes a detailed description of the technical approach for the RI/FS in accordance with the Oct 27, 2009 meeting notes, generated under the previous work assignment with CH2MHill, WA 011-RSBD-B5Y7. The work plan shall specify the necessary procedures, inspections, deliverables, a schedule with specific dates for completion of each required activity and deliverable required by the SOW and a list of key contractor personnel providing support on the work assignment.
- The contractor shall prepare the estimated cost to complete the work assignment, including subcontractor costs, for each element of the SOW; provide a breakdown of the cost by task and subtask levels, in accordance with the contract work breakdown structure (WBS).
- As directed, the contractor shall attend a work plan fact finding/negotiation meeting via teleconference with USEPA. The contractor shall prepare and submit a revised work plan incorporating the agreements made in the fact finding/negotiation meeting.
- The contractor shall provide a conflict of interest disclosure.

Task 1.2 Site-Specific Plans

The contractor shall review all existing site-specific plans and prepare, update, and/or maintain plans, as necessary, for RI/FS implementation. Typical plans include, but are not limited to, the following:

- Site Management Plan. The SMP provides EPA with a written understanding of how access, security, contingency procedures, management responsibilities, and waste disposal are to be handled.
- Sampling and Analysis Plan (SAP) which is comprised of the following two parts:

- ► Field Sampling Plan (FSP) in accordance with 40 CFR 300.415(b)(4)(ii). The FSP describes the number type, and locations of samples and the types of analyses. Before creating the field sampling plan, the contractor shall review and compile all existing data and prepare FSP accordingly.
- Quality Assurance Project Plan (QAPP) in accordance with Intergovernmental Data Quality Task Force Uniform Federal Policy (UFP) for Quality Assurance Project Plans, EPA-505-B-04-900A, March 2005. The UFP-QAPP meets all the requirements of EPA Requirements for Quality Assurance Project Plans (QA/R-5) EPA/24/B-01/003, March 2001 (reissued May 2006). The QAPP describes policy, organization, and functional activities and the data quality objectives and measures necessary to achieve adequate data for use in planning and documenting the sampling investigation.
- Data Management Plan (DMP). The DMP outlines the procedures for storing, handling, accessing, and securing the data collected during the sampling event.
- Site-specific Health and Safety Plan (HSP) that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120(I)(1) and (I)(2). NOTE: The PRP's HSP may be adopted for use by the contractor if appropriate.

Task 1.3 Pollution Liability Insurance

If the contractor plans to bill insurance premiums as a direct charge to the work assignment and there is no contract-wide Pollution Liability Insurance, the contractor shall prepare and submit costs to the Contracting Officer for approval for work assignment-specific Pollution Liability Insurance. (NOTE: The contractor shall track and report all costs associated with this subtask separately and in accordance with the Reports of Work, Attachment B, of this contract.)

Task 1.4 Project Management and Reporting

The contractor shall perform activities required to effectively manage the work assignment.

- The contractor shall provide general work assignment management and coordination to implement the work assignment SOW. The contractor shall prepare monthly progress reports in accordance with the requirements under the contract. The contractor shall manage and track costs and prepare and submit invoices. The contractor shall report costs and level of effort (by P-level) for the reporting period as well as cumulative amounts expended to date.
- The contractor shall participate in progress conference calls during the course of the work assignment. For budgeting purposes, the contractor shall assume 12 meetings, with 1 person in attendance, for 1 hour as required.
- The contractor shall accommodate any external audit or review mechanism as directed by EPA.
- The contractor shall attend EPA-held training as required.

Task 1.5 - Subcontractor Procurement and Support Activities

The contractor shall identify, procure and administer the necessary subcontracts; i.e. drillers, Geoprobe, analytical services, surveyors.

The contractor shall review, approve, and monitor the subcontractor's QA/QC program and conduct audits, as required and shall perform the necessary management and oversight of any subcontractor(s) needed to implement this SOW according to contract requirements. The contractor shall review and approve subcontractors' invoices and issue any necessary contract modifications.

Task 2 - Community Involvement

This task includes technical support provided by the contractor during public/availability meeting(s) under the associated community involvement work assignment. The contractor shall provide community involvement support to USEPA throughout the RI/FS in accordance with the *National Oil and Hazardous Substances Pollution Contingency Plan* (NCP, 40 CFR Part 300) and the *Community Relations in Superfund - A Handbook*, (U.S. EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9230.0-3C, January 1992. For budgeting purposes the contractor shall assume that the contractor will provide technical support at 1 public/availability meetings with 1 contractor personnel on attendance.

Task 3 - Field Investigation/Data Acquisition

CH2M Hill developed a list of action items under Work assignment 011-RSBD-B5Y7. Those activities have been highlighted in the text below. Data acquisition entails collecting environmental samples and information required to support the RI/FS. The planning for this task is accomplished in Task 1 - Project Planning and Support, which results in the plans required to collect the field data. Data acquisition starts with EPA's approval of the FSP and QAPP developed in Task 1 and ends with the demobilization of field personnel and equipment from the site. The contractor shall perform the following field activities or combination of activities for data acquisition in accordance with the EPA-approved FSP:

- Mobilization. The contractor shall:
 - Field Screening Identification of Field Support Equipment, Supplies, and Facilities
 - o Site Set up. Activities may include: installation of utilities, construction of a staging area, set up a field laboratory, clearing of the site to facilitate the transportation of equipment and vehicles.
- Perform Site Reconnaissance. The contractor shall conduct site surveys including property, boundary, well inventory, utility rights-of-way, and topographic information.
- Conduct Geological Investigations (Soils and Sediments). The contractor shall conduct
 geological investigations of surface and subsurface soils and sediments and test pits. More
 specifically, the contractor shall sample the property located on a triangular area south east corner
 across the road from the site and adjacent pond off-site as well as the drainage ditches along the
 road near the residential areas.
- Conduct Air Investigations. The contractor shall conduct air investigations. (N/A)
- Conduct Hydrogeological Investigations (Ground Water and Surface Water). The contractor shall conduct hydrogeological investigations of ground water including the installation and

development of wells, downhole geophysics and execution of pump tests and groundwater/surface elevation measurements. More specifically, the contractor shall collect samples from the ground water in the true aquifer after installation of proper monitoring wells, sample the retention ponds and the wetland areas on the west side as needed if it appears that storm water discharge to this area may have caused sediment contamination in excess of that documented in the RI. Please note, all surface water samples should be both filtered and unfiltered. Also, look into natural attenuation and geochemical parameters for ground water.

- Conduct Waste Investigation. The contractor shall conduct synthetic precipitation leachate procedure test (SPLP) on residue outside the previously sampled residue piles and shall investigate the damaged storm drain structure onsite migration pathways and amount of residue. The contractor shall determine the extent of residue by volume (depth and aerial extent).
- Conduct Geophysical Investigation. (N/A).
- Conduct Ecological Investigation. (N/A)
- Collect Contaminated Building Samples. (N/A)
- Dispose of Investigation-Derived Waste. Characterize and dispose of investigation-derived
 wastes in accordance with local, State, and Federal regulations as specified in the FSP (see the
 Fact Sheet, Guide to Management of Investigation-Derived Wastes, 9345.3-03FS (January
 1992)).
- Demobilization. Activities may include: removal of equipment and restoration of site property.

Task 4 - Sample Analysis: CLP

This task includes only the subcontract cost associated with analysis of the samples where it becomes necessary for the contractor to procure analytical services. It is Regional policy for the Agency to use analytical services provided by the government whenever possible before requiring the contractor to procure analytical support. Such services include the Contract Laboratory Program (CLP), the Environmental Response Team (ERT) laboratory, or regionally procured laboratories. Efforts associated with the sample collection are included in task 3, efforts associated with shipment and validation is included in task 5, and efforts associated with data evaluation are included in task 6.

- · Ground-Water Samples
- Surface-Water Samples
- Soil and Sediment Samples
- Waste

Task 5 - Analytical Support and Data Validation

This task provides for analytical support and data validation when required of the samples collected under task 3. The contractor shall perform the following activities or combination of activities:

Collect, prepare, and ship the environmental samples in accordance with the FSP and QAPP.

- Coordinate with the EPA Sample Management Office (SMO), the Regional Sample Control Coordinator (RSCC), regarding analytical support, data validation, and quality assurance issues.
- Implement the EPA-approved laboratory quality assurance program that provides oversight of inhouse and subcontracted laboratories through periodic performance evaluation sample analyses and/or on-site audits of operations and has a system of corrective actions.
- Develop data quality objectives (DQO) for each sampling event; these DQOs shall be the determinative factor for assessing the success or failure of the sampling.
- Provide sample management including chain of custody procedures, information management, sample retention, and 10-year data storage.
- Perform data validation, when necessary. Data validation is the process by which the quality of the data, the defensibility of the data, and the chain of custody are verified.
- Review the data analysis results against the validation criteria or intended purpose.
- Develop a Data Validation Report to the Work Assignment Manager after all the data has been validated

Task 6 - Data Evaluation

The contractor shall compile the sampling data and determine usability of all data collected. The contractor shall prepare and submit a report summarizing split sample results which includes a discussion of analytical results, a comparison of PRP sampling data with the split samples analyzed by EPA, and a discussion of any discrepancies. The contractor shall perform any modeling necessary to evaluate the data.

Task 7 - Risk Assessment

The PRPs for Eagle Zinc prepared a Remedial Investigation Report in February 2005 which included a full-blown Risk Assessment for all soils, ground water and surface water. Based on the results of the sampling investigation conducted under Task 3, the contractor shall prepare a supplemental HHRA and ERA, which will update the previous Risk Assessments. The Risk Assessments will determine whether site contaminants pose a current of potential risk to human health and the environment in the absence of any remedial action. The contractor shall address the contaminant identification, exposure assessment, toxicity assessment, and risk characterization. The Risk Assessment will be used to determine whether remediation is necessary at the site, provide justification for performing remedial action, and determine what exposure pathways need to be remediated.

The contractor shall perform a Human Health Risk Assessment (HHRA) and evaluate the need for a supplemental Ecological Risk Assessment (ERA). These risk assessments shall be done in accordance with current Superfund ecological risk assessment guidance (Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments [EPA/540-R-97-006],

and The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments, ECO Update, [EPA 540/F-01/014]).

If EPA determines a full blown HHRA and/or ERA are necessary, the contractor shall prepare a draft and final HHRA Report and ERA Report that addresses the following:

- Hazard Identification (sources). The contractor shall review available information on the hazardous substances present at the site and identify the major contaminants of concern.
- Dose-Response Assessment. Contaminants of concern should be selected based on their intrinsic toxicological properties.
- Prepare Conceptual Exposure/Pathway Analysis. Critical exposure pathways (e.g., drinking water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.
- Characterization of Site and Potential Receptors. The contractor shall identify and characterize human populations in the exposure pathways.
- Exposure Assessment. The exposure assessment will identify the magnitude of actual or potential human exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the contractor shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the site.
- Risk Characterization. During risk characterization, chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, shall be compared to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the site are affecting or could potentially affect human health.
- Identification of Limitations/Uncertainties. The contractor shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.
- Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the contractor shall develop a conceptual model of the site.

Task 8 - Treatability Study/Pilot Testing (N/A)

Task 9 - Remedial Investigation Report (NA)

Task 10 - Remedial Alternatives Screening (NA)

Task 11- Remedial Alternatives Evaluation (N/A)

•Task 12 Feasibility Study Report (N/A)

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Task 13 Post RI/FS Support (N/A)

Task 14 Administrative Record (N/A)

Task 15 - Work Assignment Closeout (N/A)

The contractor shall perform the necessary activities to close out the work assignment in accordance with contract requirements. Typical activities include but are not limited to, the following:

- Package and return documents to the government.
- Duplicating/distribution/storage of files.
- Preparation of the Work Assignment Closeout Report (WACR). The contractor shall prepare the
 WACR in accordance with Regional guidance or other procedures as specified in the work
 assignment. In those circumstances where the final hours/budget are greater than the +/ 20% of
 the approved work plan hours/budget, the contractor shall provide an explanation for the
 underage/overage.

Attachment 1 - Summary of Major Submittals for the RI/FS
At the Eagle Zinc Site

At the Eagle Zinc Site			
DELIYERABLE	NO. OF COPIES	DUE DATE (Calendar Days)	
Task 1.1 RI/FS Work Plan	2	30 days after kick-off meeting	
Task 1.1 Revised Work Plan	2	15 days after receipt of comments or negotiation meting	
Task 1.1 Conflict of Interest Disclosure	2	Within five days after acceptance of work assignment	
Task 1.2 Site Management Plan	2	30 days after work plan approval	
Task 1.2 Field Sampling Plan	2	30 days after work plan approval	
Task 1.2 Quality Assurance Project Plan	2	30 days after work plan approval	
Task 1.2 Data Management Plan	2	30 days after work plan approval	
Task 1.2 Health & Safety Plan	2	30 days after work plan approval	
Task 1.3 Pollution Liability Insurance	2	TBD	
Task 1.4 Monthly Progress Reports	2	As provided for in the Contract	
Task 5 Data Validation Letter Report	2	21 days after receipt of analytical results from laboratory	
Task 6 Data Evaluation Summary Report	2	45 days after receipt of validated data.	
Task 7 Draft SLHHRA Letter Report	2	# days after notification from EPA	
Task 7 Draft SLERA Letter Report	2	# days after notification from EPA	
Task 7 Draft HHRA Report	2	# days after completion of field investigation	

DELIVERABLE	NO. OF COPIES.	
Task 7 Draft ERA Report	. 2	# days after completion of field investigation
Task 7 Final SLHHRA Letter Report	2	10 days after receipt of comments
Task 7 Final SLERA Letter Report	2	,10 days after receipt of comments
Task 7 Final HHRA Report	2	21 days after receipt of comments
Task 7 Final ERA Report	2	21 days after receipt of comments
Task 15 Work Assignment Completion Report (WACR)	2	45 days after receipt of the Work Assignment Closeout Notification (WACN)
Task 15 Final Costs documented in WACR	2	90 days after receipt of WACN

Attachment 2 - Regulations and Guidance Documents

- American National Standards Practices for Respiratory Protection. American National Standards Institute Z88.2-1980, March 11, 1981.
- 2. ARCS Construction Contract Modification Procedures September 89, OERR Directive 9355.5-01/FS.
- 3. CERCLA Compliance with Other Laws Manual, Two Volumes, USEPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1-01 and -02.
- 4. Community Relations in Superfund A Handbook, USEPA, Office of Emergency and Remedial Response, January 1992, OSWER Directive No. 9230.0-3C.
- 5. A Compendium of Superfund Field Operations Methods, Two Volumes, USEPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
- 6. Construction Quality Assurance for Hazardous Waste Land Disposal Facilities, USEPA, Office of Solid Waste and Emergency Response, October 1986, OSWER Directive No. 9472.003.
- Contractor Requirements for the Control and Security of RCRA Confidential Business Information, March 1984.
- 8. Data Quality Objectives for Remedial Response Activities, USEPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
- 9. Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, USEPA Region IV, Environmental Services Division, April 1, 1986 (revised periodically).
- 10. EPA NEIC Policies and Procedures Manual, EPA-330/9-78-001-R, May 1978, revised November 1984.
- 11. Federal Acquisition Regulation, Washington, DC: U.S. Government Printing Office (revised periodically).
- 12. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, USEPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive NO. 9355.3-01.
- 13. Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potential Responsible Parties, USEPA Office of Emergency and Remedial Response, EPA/540/G-90/001, April 1990.
- 14. Guidance on Expediting Remedial Design and Remedial Actions, EPA/540/G-90/006, August 1990.
- 15. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites, USEPA Office of Emergency and Remedial Response (DRAFT), OSWER Directive No. 9283.1-2.
- 16. Guide for Conducting Treatability Studies Under CERCLA, USEPA, Office of Emergency and Remedial Response, Prepublication version.
- 17. Guide to Management of Investigation-Derived Wastes, USEPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.
- 18. Health and Safety Requirements of Employees Employed in Field Activities, USEPA, Office of Emergency and Remedial Response, July 12, 1982, EPA Order No. 1440.2.
- 19. Interim Guidance on Compliance with Applicable of Relevant and Appropriate Requirements, USEPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.
- 20. Methods for Evaluating the Attainment of Cleanup Standards: Vol. 1, Soils and Solid Media, February 1989, EPA 23/02-89-042; vol. 2, Ground water (Jul 1992).
- 21. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.
- 22. NIOSH Manual of Analytical Methods, 2nd edition. Volumes I-VII for the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
- 23. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.
- 24. OSWER Directive No. 9355.7-02, May 23, 1991. [Guidance, p. 3-5]
- 25. OSWER Directive No. 9242.3-08, December 10, 1991. [Guidance, p. 2-2]
- Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, February 19, 1992, OSWER Directive 9355.7-03.

- 27. Procedure for Planning and Implementing Off-Site Response Actions, Federal Register, Volume 50, Number 214, November 1985, pages 45933-45937.
- 28. Procedures for Completion and Deletion of NPL Sites, USEPA, Office of Emergency and Remedial Response, April 1989, OSWER Directive No. 9320.2-3A.
- 29. Quality in the Constructed Project: A Guideline for Owners, Designers and Constructors, Volume 1, Preliminary Edition for Trial Use and Comment, American Society of Civil Engineers, May 1988.
- 30. Remedial Design and Remedial Action Handbook (Draft), USEPA, Office of Emergency and Remedial Response, August 1993, OSWER Directive No. 9355.5-22.
- 31. Scoping the Remedial Design (Fact Sheet), May 1993, OSWER Publ. 9355-5-21 FS.
- 32. Standard Operating Safety Guides, USEPA, Office of Emergency and Remedial Response, November 1984.
- 33. Standards for the Construction Industry, Code of Federal Regulations, Title 29, Part 1926, Occupational Health and Safety Administration.
- Standards for General Industry, Code of Federal Regulations, Title 29, Part 1910, Occupational Health and Safety Administration.
- 35. Superfund Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, April 1990, ______.
- 36. Superfund Remedial Design and Remedial Action Guidance, USEPA, Office of Emergency and Remedial Response, June 1986, OSWER Directive No. 9355.0-4A.
- 37. Superfund Response Action Contracts (Fact Sheet), May 1993, OSWER Publ. 9242.2-08FS.
- 38. TLVs-Threshold Limit Values and Biological Exposure Indices for 1987-88, American Conference of Governmental Industrial Hygienists.
- 39. Treatability Studies Under CERCLA, Final. USEPA, Office of Solid Waste and Emergency Response, EPA/540/R-92/071a, October 1992.
- Value Engineering (Fact Sheet), USEPA, Office of Solid Waste and Emergency Response, Publication 9355.5-03FS, May 1990.
- 41. Guide to Documenting Cost and Performance for Remediation Projects, Publication EPA-542-B-95-002, March 1995.
- 42. Presumptive Remedies: Policy and Procedures, U.S. EPA, Office of Solid Waste and Emergency Response, Directive 9355.0-47FS, EPA 540-F-93-047, PB 93-963345, September, 1993.
- 43. Presumptive Remedies for Soils, Sediments, and Sludges at Wood Treater Sites, U.S. EPA, Office of Solid Waste and Emergency Response, Directive 9200.5-162, EPA/540/R-95/128, PB 95-963410, November, 1995.
- 44. Presumptive Response Strategy and Ex-Situ Treatment Technologies for Contaminated Groundwater at CERCLA Sites, U.S. EPA, Office of Solid Waste and Emergency Response, Directive 9283.1-12, EPA 5401R/023, June. 1996.
- 45. "Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA, USEPA, Office of Emergency and Remedial Response 1993, EPA/540-R-93-057".
- 46. EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5, March 2001.
- 47. Intergovernmental Data Quality Task Force Uniform Federal Policy (UFP) for Quality Assurance Project Plans, EPA-505-B-04-900A, March 2005.
- 48. Data Quality Objective Process for Hazardous Waste Site Investigations, EPA QA/G-4HW, January 2000.